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Nan Steven; Theo Van Tilburg

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STIMULATING FRIENDSHIP IN LATER LIFE: A STRATEGY FOR REDUCING LONELINESS AMONG OLDER WOMEN

Nan Stevens

Department of Psychogerontology
University of Nijmegen, Nijmegen, the Netherlands

Theo van Tilburg

Department of Sociology and Social Gerontology
Free University, Amsterdam, the Netherlands

In order to promote well-being and alleviate loneliness among older women, a program was developed to help them improve existing friendships or develop new friendships. In a pilot study thirty-two participants in the program were interviewed on their friendships and loneliness at two points in time, immediately following the course and a year later. Loneliness scores were compared to those of a matched control group from a large nationally representative sample. Both groups were very lonely initially and demonstrated a significant reduction in loneliness a year later. However more women in the friendship course were successful in reducing their loneliness; these women had developed new friendships of varying degrees of closeness and had increased the complexity of their friendship networks. These changes are significantly related to the decline in loneliness. Limitations of the research design and suggestions for future studies on the friendship program are presented in the discussion.

During the last two decades various studies have found evidence for the significance of friendship for the well-being of older persons, especially for older women (Adams, 1987; Armstrong & Goldsteen, 1990;

Address correspondence to Nan Stevens, Department of Psychogerontology, University of Nijmegen, P.O. Box 9104, 6500 HE Nijmegen, the Netherlands.
E-mail: stevens@psych.kun.nl

Bankoff, 1983; Dykstra, 1995; Field, 1995; Stevens, 1995; Jerrome, 1981; Matthews, 1986). To understand the contribution of friends to well-being in later life it is useful to distinguish between two basic functions of relationships, the companionate function and the supportive function (Rook, 1990), as well as two functions of friendship, socialization and sustainment of identity and meaning (Hess, 1972; Hartup & Stevens, 1997). Friendships are usually sought for the pleasure and satisfaction that they can provide, thus for companionship. The shared activities, humor and social rituals that are part of friendship, as well as the stimulation one experiences in the company of friends, have a positive effect on an older individual's well-being (Larson & Bradney, 1988; Larson, Mannell, & Zuzanek, 1986).

In addition to providing companionship, friends may take on a supportive function in situations that are problematical or stressful. The provision of emotional or instrumental support by others, including friends, helps to reduce the distress involved in major life transitions such as retirement (Jerrome, 1981), the loss of a partner (Bankoff, 1983; Dykstra, 1995; Stevens, 1995), and relocation to housing for the elderly (Hochschild, 1973; Armstrong & Goldsteen, 1990). In a longitudinal study of older women's friendship Adams (1987) found that the women intensified activities related to friendship following changes which elicited negative emotions, an indication that women sought support from their friends.

Not only are transitions sources of stress, they also involve new situations that require adaptation in behavior and attitudes by the individual involved. Friends who have already experienced a similar transition are often important in helping an older person relinquish former roles and behavioral patterns and developing new ones (Hess, 1972). By serving as examples, providing behavioral cues and information on the new situation, friends contribute to the process of socialization to old age (Jerrome, 1981; Hess, 1972).

Another way in which friends contribute to well-being is by helping older individuals sustain a sense of continuity in their lives. In a changing world old friends can help reaffirm their identity and their interpretations of both past and present life events. As Jerrome (1981) pointed out, "Values which in contemporary terms are dated can be freely expressed with people whose life span has given them comparable experiences and outlook" (p. 190). With age this sustaining function of friendship becomes increasingly important (Carstenson, 1991; Hess, 1972).

As important as friends may be for an older person's well-being, not all older people have friends available to provide companionship, support and affirmation or to serve as socializing agents in new situ-

ations. In a Dutch study on living arrangements and social networks (LSN study) of persons between the ages of 54 and 85, 16% did not include anyone outside the family in their primary social network (Knipscheer, de Jong-Gierveld, van Tilburg, & Dykstra, 1995). Despite the fact that the average network size was 14 persons, 56% of the respondents did not include friends in their primary networks. This high percentage not mentioning friends may be partially due to the way that "friend" is used as a residual category in this study; non-kin in the primary network who are neighbors or colleagues, are labelled as such, never as friends. Thus the percentage of older persons without friends is somewhere between 16 and 56%.

In a Dutch study on gift-giving, 24% of the older subjects exchanged gifts with and offered hospitality in the home primarily to family members, as opposed to a large group (60%) who "gave" to both family and friends, and a small group (16%) who shared gifts and hospitality primarily with friends (Komter & Volleburgh, 1996). Those who participate in a "family culture" as opposed to a "friends culture" tend to be older and have fewer years of formal education.

The absence of friends is associated with age, social class and gender. In his study on kinship and friendship in Britain, Allan (1977, p. 389) observed that "kin play a far more important part of working class patterns of sociability than in middle class ones." Among the current generations of older persons, women traditionally have had greater domestic responsibilities and familial obligations, which left them with less leisure time and fewer opportunities for meeting people outside the home (Allan, 1989). Many women of the older generation, at least in Europe, have built their social lives around kinship ties.

Another factor which influences the availability of friends in later life involves changes related to aging. Prior to retirement a reinvestment in friendship has been observed among individuals in the United States who are in good health, financially comfortable and who have a reservoir of social contacts available (Brown, 1981). However various fluctuations in the social environment occur as friends retire, move away, become ill and eventually die. Loss of the partner leads to a disruption of the surviving partner's social life, especially when this social life was couple-oriented (Lopata, 1980; Stevens, 1989). An aging individual's own health and income may decline, resulting in limiting mobility and interaction outside the home, thus reducing contact with friends and the possibilities for making new friends (Peters & Kaiser, 1985).

The changes in later life that influence the availability of friends also influence loneliness. The Dutch LSN survey found that 36% of

the respondents over age 55 were characterized by more intense feelings of loneliness, 30% were moderately lonely, and 34% were not at all lonely (de Jong Gierveld & van Tilburg, 1995). Loneliness was defined here as "a situation experienced by the individual as one of an unpleasant or unacceptable discrepancy between the amount and quality of social relationships as realized, compared to the social relationships as desired" (de Jong Gierveld et al, 1995, p. 161). The authors described various mediating structures that help prevent or alleviate loneliness among older persons; these include having a partner, having a large network of frequent and close personal relationships, especially with children, children-in-law, friends and acquaintances, having frequent exchanges of emotional support within this network, frequent church attendance and living in a household with others.

AN EDUCATIONAL PROGRAM ON FRIENDSHIP FOR OLDER WOMEN

Since friendship contributes to well-being in later life and a considerable group of older persons lacks friends or the beneficial qualities of friendship, development of an educational program on friendship seemed to be a useful strategy to promote well-being in general and to reduce loneliness in particular. The decision was made to focus on older women as the first target of this intervention for several reasons. In the first place women live alone more often in later life and are more often widowed due to the difference in life expectancy between men and women; both situations increase their vulnerability to loneliness (Knipscheer et al., 1995). Furthermore older women appear to be more interested in friendship (Field, 1995) and clearly benefit from interaction with friends (Adams, 1987; Jerrome, 1981; Stevens, 1995). Recognition of the desirability of a special course on friendship for older women by the Dutch National Platform for Women over 55 provided an additional impetus for the project (Hermans-Huiskes, 1993).

The goal of the friendship program is to help older women reduce their loneliness by developing the friendships that they desire, either by improving existing friendships or developing new ones. The program consists of twelve lessons focused on different topics related to friendship; examples of topics include expectations of friendship, early experiences in friendship, self-evaluation as a friend, making new friends, improving existing friendships, and setting goals in

friendship (Stevens & Albrecht, 1995). Each lesson consists of theory on the topic, practice in skills that are important in friendship (such as listening, self-disclosure, empathy, assertiveness), role playing of social situations that are difficult for participants (e.g., attending a reception) and a homework assignment. Participants also have the opportunity to discuss their personal experiences related to the topic covered by the lesson or related to the homework assignment.

The friendship program is based on principles of re-evaluation counseling (Jackins, 1981) and feminist counseling (Miller, 1988), as well as the notion of relational competence (Hansson, Jones, & Carpenter, 1984). The importance of self-esteem as the basis of friendship is emphasized throughout the course; the participants are advised to become "best friends" with themselves, in other words, to become aware of their own wishes and needs in friendship, translating these into goals in order to develop an optimal social life for themselves. The versatility of each individual is also emphasized, a versatility that is best expressed in a network of different types of relationships, including different types of friendship.

The program is structured according to a four-stage conceptual model explaining how relational competence influences one's relationships (Hansson et al., 1984). One aspect of friendship which is a source of difficulties involves the expectations that one has of friendship; expectations are the main topic during the first phase of the course. Often women without friends are searching for an "ideal friend," one that fulfills all their needs and desires, is always available and who is comparable to an ideal partner. Due to such high expectations these women overlook potential friends and tend to lack appreciation for the relationships that are available.

A second phase in friendship formation in which women can improve their competence involves the development of friendship and a network of friends. Several lessons are devoted to important skills and attitudes, as well as personal experiences, in the process of building friendships. There is a myth that friendship is only a question of meeting the right person with whom one has immediate rapport.

Participants gain insight in their own network by drawing their convoy of relationships (Kahn & Antonucci, 1980), in which relationships are situated in three concentric circles around themselves, hierarchically arranged according to importance and closeness. Reflection on their convoy helps women evaluate the current state of their primary relationships, including friendships, in terms of their own needs and desires. The third phase in which they can increase their competence concerns how well they utilize the friendships that are available. Often women have friends available but are hesitant to

call on them for company or support. There are also friendships that have declined due to lack of input; this may or may not be a result of conscious choice. Maintaining friendships require continuing effort as individual situations and needs change; active effort and flexibility are necessary. This process of maintaining friendship is the fourth phase in which women can increase their competence.

Since the manual for the program on friendship became available in 1995; it has been distributed in over 200 agencies providing services for older persons; the agencies offering the course include centers for adult education, community mental health centers and social service agencies. The manual provides sufficient guidelines for those who are familiar with group work and counseling women to teach the program. Recently the program has been adapted for women in middle age (40–60) and a new version is being developed for older men.

PRELIMINARY FINDINGS ON PROGRAM EFFECTIVENESS

In one city a follow-up study has been carried out to evaluate the effectiveness of the program on friendship for older women. Several questions have been addressed in this study:

1. Does the program attract the women it intends to attract, i.e., older women who are lonely or potentially vulnerable for loneliness?
2. How successful are older women who have participated in a friendship course, in reducing their loneliness in the course of a year following the course, compared to a control group of women who did not participate in the course?
3. Are there changes in the quantity and/or quality of their friendships in the year following the course among the participants that are related to a reduction in loneliness?

METHOD

Subjects

This study involves a group of 32 participants in the friendship program for older women, organized by the local Senior Services Agency in cooperation with the Department of Psychogerontology at

the University of Nijmegen. The study covers five groups organized in 1994–1996; 59% of the women who followed the program agreed to participate in the research, a response rate that is similar to that in other studies on relationships of older persons carried out in the community (Knipscheer et al., 1995; Stevens, 1989). The participants were originally recruited for the program through local newspaper articles and folders distributed in neighborhood centers for older persons.

The age of participants varied from 54 to 80; average age was 63.2. Marital status also varied: 9% were never married, 28% divorced, 38% widowed, and 25% married. There is a higher proportion of divorced women and lower proportion of married women than in the general population of women over age 55 (respectively, 5% divorced and 52% married). The course clearly tends to attract older women living alone (75% in this sample).

The control group was drawn from data from a longitudinal survey on living arrangements and social networks in the Netherlands that employs a representative sample (Knipscheer et al., 1995; Deeg & Westendorp-de Seriere, 1994); 913 of these respondents were women aged 54–84, living independently in the community, who were interviewed twice with an interval of 9 to 14 months. Other selection criteria were that their marital status did not change between the two intervals and there were no missing data on the matching variables.

Measures and Procedures

The evaluation of the course does not involve an experimental design, with random assignment of participants to the experimental condition involving the friendship program and a control group; nor does it include a pretest and a posttest. Since the friendship program was new and relatively unknown it was a challenge to attract participants, especially women belonging to the target group of lonely older women. Random assignment of potential participants to the program or a waiting list group was considered unethical by program teachers and the researchers. They were hesitant to begin the program with a request to participate in research, in the fear that women might be intimidated and not take part in the program. Therefore the decision was made to study changes in friendship and loneliness following the course with participants who volunteered for the study; these women were compared to a control group of women who had not participated in the course. The control group was matched on loneliness at the first measurement and important background variables (age, marital status, presence of children and friends in network). The weakness of

this design, such as self-selection of participants, will be discussed later.

The data on participants in the friendship program were collected by means of a written questionnaire at the end of the program; women were then asked to participate in a follow-up study. Those willing to participate were interviewed in their homes within a few weeks of the end of the course and approximately one year later.

The written questionnaire included questions on age, marital status, living arrangements, number of children, subjective health, motivation for participation, evaluation of specific aspects of the course, and a loneliness questionnaire (De Jong Gierveld & Kamphuis, 1985). The loneliness questionnaire consists of five positive and six negative items. The positive items assess a sense of belonging and the absence of a discrepancy in the area of desired relationships, for example, "I can rely on my friends whenever I need them." Examples of negative items are: "I experience a sense of emptiness" and "I miss having a really close friend" (see Table 3). Scores on the loneliness scale range from 0 (not lonely) to 11 (extremely lonely). The scale has been used in several surveys and has proven to be a reliable and valid instrument (van Tilburg & de Leeuw, 1991).

In the first interview an important source of information was the convoy of relationships which the women had drawn during the program. According to the convoy method, respondents fill in the names of important persons in their social network in three concentric circles drawn around themselves in the center; they are assigned a position in a circle according to the importance and degree of closeness of the relationship (Antonucci & Akiyama, 1987). The interviewer asked the respondent to describe the persons whom they considered to be friends in the convoy, noted their position, and asked questions about the duration of the friendship, the nature of the friendship in terms of closeness, care and trust, frequency of contact, and activities characteristic of the friendship.

During the second interview that took place a year after the program had ended, the original convoy was examined again, this time for changes in friendship (and other important relationships) during the previous year. Respondents were asked whether they would now place friends in the same or different circles, whether new friends had been added to the convoy, the nature of any new friendships, and whether certain friends no longer belonged in the convoy. The loneliness questionnaire was also administered for a second time.

The information from the convoy was analyzed in various ways. Whether or not respondents reported new friendships, improvements in friendships, loss of friends, improvements in family or loss of

family relationships was scored dichotomously. The presence of friends in each circle of the convoy was scored, as well as the total number of circles in which friends were present; this last measure provides an indication of the complexity of the friendship network.

Another way of measuring complexity involves the four levels of friendships distinguished by Young (1986), according to the history, duration, frequency of contact, degree of mutual caring and trust, and shared activities. Level AA and A friendships are more intimate, with a high degree of openness, care and trust. These friendships are usually of longer duration; they differ only in frequency of contact, with AA friends seeing one another on a daily "check-in" basis, and A friends seeing one another regularly but less frequently. Level B friendships are based on shared interests, while level C involves membership in a group, such as a church or a work setting. These B and C friendships are of shorter duration and are less intimate. Each friendship in the network was assigned to level AA, A, B, or C; then the complexity of the friendship network was scored on a 6-point scale (1 = *no friends*, 2 = *only B or C friends*, 3 = *only A friends*, 4 = *A and C friends*, 5 = *A and B friends*, 6 = *A, B and C friends*). The first author and a graduate student scored the level of each friendship separately; they had scored friendships at the same level in 85% of the cases and reached a consensus on the remaining 15%.

Analysis

To compare scores on loneliness at two different points in time, *t* tests for paired samples were used for each group; they revealed whether or not significant reduction of loneliness had occurred within each group during a year. A *t* test for independent samples was applied to the difference between the scores in loneliness at the first and second measurement in order to determine if the change in loneliness following the friendship program was greater than the change in loneliness among members of the control group. Finally the Edwards-Nunnally method for studying individual change (Speer & Greenbaum, 1995) was applied to determine whether individual change was significant. This method takes into account measurement errors and regression to the mean in the determination of significance of change in scores. Partial correlations were used to examine whether there was a relation between changes in friendship and change in loneliness within the group that had participated in the friendship program. Unfortunately this was not possible with the control group because the same kind of data on changes in friendship was not available. In both groups it was possible to examine the items

on the loneliness scale on which significant reduction had occurred. The content of the items also provides an indication of changes in experience of friendship.

Results

Before describing the results related to loneliness and friendship variables, the results of the matching procedure will be reported. For each participant in the friendship course, a respondent in the LSN study was selected with the best match on loneliness score at the first measurement point, age, marital status, number of children, and the presence of friends among the persons in the personal network. There is a slight difference in age between the two groups; at the first measurement point this was 63.4 years for the women in the friendship course and 69.8 for the women in the control group. The average number of children was similar (2.6 and 2.3). More women in the friendship course placed friends in their convoy of relationships, namely 90%, in comparison to the women in the control group who named friends among the persons in primary social network (78%). On all of the matching variables there were not significant differences between the group of participants and the control group according to the *t* test for the equality of means and Levene's test for the equality of variance.

The first question concerns whether or not the women participating in the course belonged to the target group of lonely older women. Loneliness at the first measurement point was 7.2 for the participants in the course, which on the 11-point loneliness scale is quite high. In the LSN survey from which the control group was derived, average loneliness scores for women of different marital status are much lower: 1.7 for married women, 2.4 for never-married women, 3.1 for widows who have not remarried and 3.3 for divorced women who have not remarried (de Jong Gierveld & Dykstra, 1998). It is clear that as a group the participants in the friendship program are quite lonely, in comparison to women of similar age in the larger population. Earlier it was noted that the majority of participants in the friendship program live alone, and are either widowed or divorced; they are quite lonely despite the presence of "friends" in their convoys. Apparently the friendships that were available at the beginning of the course did not meet their needs. The first conclusion is that the program does attract women from the target group.

The second question concerns whether or not program participants were successful in reducing their loneliness, this in comparison to the

matched control group of women who did not participate in the course. A year after the program the average loneliness score of participants has declined from 7.2 ($SD = 2.9$) to 4.5 ($SD = 3.2$), which represents a significant decline, according to the t test ($t = 5.43$, $p = .000$). The control group also demonstrates a significant reduction in loneliness, from 7.1 ($SD = 3.1$) to 5.5 ($SD = 3.7$; $t = 4.25$, $p = .000$).

One way to determine whether or not the program participants were more successful than members of the control group in reducing loneliness is to apply a t test for independent samples to the differences in loneliness scores from the first and second measurement for each group. The mean change score of -2.59 ($SD = 2.89$) for the program participants is significantly greater than the mean change score (-1.41 , $SD = 1.8$) for the control group ($t = -1.96$, $p = .054$).

Regression to the mean will account for some of the reduction in scores, therefore the Edwards-Nunnally method for measuring individual change was applied to the data; these results are presented in Table 1. More individuals who took part in the friendship course have experienced a significant reduction in loneliness compared to those in the control group. At a significance level of .10, loneliness is reduced for 15 participants of the friendship course (47%) and for 8 women in the control group (25%); it increased significantly for 3 women in the course and 3 women in the control group. Both methods of analyzing changes in loneliness indicate that the participants in the friendship program are more successful in reducing their loneliness than the control group.

The third question concerns whether or not changes in friendship have occurred in the year following the course. More than two thirds (69%) of the women report that they have made new friends since participating in the program; they met these friends through clubs or educational activities (including the friendship program) and occasionally through an advertisement. Occasionally women have renewed contact with an old friend with whom they had lost touch prior to the program. Almost half of the women (40%) report that existing friendships have improved; this improvement varies from appreciating friendships more to maintaining contact with friends more actively, by proposing activities together more often or engaging in more confidential talk.

There is not only gain in friendship quantity or quality, there is also loss for 21% of the women; some report that they have broken off friendships which did not live up to their expectations. A few friends were lost due to serious illness or the death of a friend.

The presence of new friends and improvement of existing friendships is reflected in the women's convoys. There is a significant

TABLE 1 Loneliness Scores of Participants in the Friendship Course and the Matched Control Group at Two Measurement Points, and Results of Edwards-Nunally Method for Studying Individual Change

Participants			Control group		
T ₁	T ₂		T ₁	T ₂	
10	10		11	11	
1	1		1	0	
2	0	*	1	0	
9	6	*	7	7	
4	2		4	0	****
10	11	**	11	11	
4	2		5	2	**
7	5		6	4	
6	5		5	6	
9	9		6	4	
9	9		8	7	
2	0	*	2	1	
9	3	****	9	10	*
6	1	****	5	1	****
8	6		9	9	
10	2	****	7	3	***
6	0	****	5	3	
10	5	****	6	2	***
5	3		4	5	
11	3	****	11	9	
11	7	**	9	10	*
3	0	***	1	2	
10	7		7	6	
2	6	****	2	0	*
9	0	****	8	6	
9	6	*	9	8	
7	5		6	4	
8	3	****	7	5	
8	9	*	8	9	*
7	6		6	1	****
1	9		10	5	****
9	2	****	5	5	

Note. * $p < .10$; ** $p < .05$; *** $p < .01$;
**** $p < .001$.

increase in the number of women naming friends in the inner circle of the convoy from 38% to 53% ($t = -3.23, p = .003$). Also the number of circles in which friends are placed increases significantly between measurement intervals, from 1.68 to 2.03 ($t = -2.40, p = .023$).

TABLE 2 Partial Correlation Coefficients Between Loneliness at T2, Change in Loneliness at T2 and Friendship Variables at T2, Controlling voor loneliness at T1

	Loneliness at T2	Change loneliness	New friends	Friends inner circle	Friends outer circle	Number of circles with friends	Change in level of friendship
Loneliness at T2	1.000						
Change loneliness	—	1.000					
New friends	-.32*	-.40**	1.000				
Friends in inner circle T2	-.20	-.27	.50***	1.000			
Friends in outer circle T2	-.31*	-.25	.24	-.10	1.000		
Number of circles with friends at T2	-.36**	-.33*	.56***	-.60***	.52***	1.000	
Change in level of friendship	-.35**	-.41**	.48***	.50***	.17	.45***	1.000

Note. * $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$.

Another way of measuring complexity in the friendship network involves the four levels of friendship identified by Young (1986). In the year following the course there is a significant increase in complexity of levels of friendship available to the women who participated in the course from 3.15 ($SD = 1.59$) to 4.28 ($SD = 1.92$) ($t = -3.97$, 31 df , $p = .000$). This means that more women have a combination of intimate friendships (A level) and social friendships (B and/or C level) based on shared activities or group membership, rather than a single level of friendship (A or B or C) available to them.

A rather crucial question is whether changes in friendship are related to the reduction of loneliness that was found among program participants. Partial correlations were computed between loneliness at the second measurement, change in loneliness, and several friendship variables, while controlling for loneliness at the first measurement (Table 2).

There is a significant negative correlation between the presence of new friends in the convoy, having friends in the outer circle, the number of circles in the convoy in which friends appear, an increase in the complexity of levels of friendship available, on the one hand, and loneliness at the second measurement on the other hand. Change, which is actually reduction in loneliness, also correlates significantly with the presence of new friends, the number of circles in the convoy with friends, and change in the level of friendship. It is interesting to note the high positive correlations between the presence of new friends, friends in the inner circle of the convoy and change in the level of friendship available, suggesting that the development of more intimate friendships have contributed to the increase in complexity in levels of friendships among the participants, more so than the development of friends in the outer circle of the convoy.

Due to the high collinearity between the various friendship variables and the small size of the sample, we do not find significant contributions of the friendship variables to reduction of loneliness in a regression analysis.

Another way to study the connection between friendship and loneliness is to examine more closely the items on which a significant reduction of loneliness occurs for participants in the program and for members of the control group (see Table 3). These refer to discrepancies in specific kinds of friendship and in specific functions of relationships such as companionship and support.

On seven of the eleven items there is greater reduction in loneliness among program participants, for example on items related to friendship: "I miss having a close friend" and "I feel my circle of

TABLE 3 Percentage of Participants Reporting Loneliness at T1 and T2, Significance of Change According to t Tests for Paired Samples

	Program participants			Control group		
	T1 %	T2 %	significance	T1 %	T2 %	significance
a. There is always someone that I can talk to about my day-to-day problems.	56	47	<i>ns</i>	59	38	**
b. I miss the pleasure of company of others.	69	56	<i>ns</i>	72	56	<i>ns</i>
c. There are enough people that I feel close to.	53	22	***	56	44	*
d. I miss having a really close friend.	78	41	***	66	47	*
e. Often I feel rejected.	53	44	<i>ns</i>	63	44	*
f. There are many people that I can count on completely.	75	38	***	66	66	<i>ns</i>
g. I experience a general sense of emptiness.	81	50	**	84	53	***
h. I feel my circle of friends and acquaintances is too limited.	82	37	***	63	59	<i>ns</i>
i. There are plenty of people I can lean on in case of trouble.	53	29	*	53	47	<i>ns</i>
j. I miss having people around.	69	41	**	69	53	<i>ns</i>
k. I can call on my friends whenever I need them.	63	38	***	59	44	*

****p* < .001; ***p* < .01; **p* < .05.

friends and acquaintances is too limited." The program participants originally reported more loneliness on these items mentioning friends; this is related to their self-selection as participants in a friendship program. They admitted to missing friendships and were motivated to improve them. But they also improved more on items referring to social embeddedness (having people one can count on completely), support (having plenty of people to lean on) and companionship (no longer missing having people around). These results support the assumption of the program that improving friendships is a reliable strategy for reducing loneliness among women who are oriented toward friendship.

DISCUSSION

The results of this study indicate that a significant reduction of loneliness occurs among women between the ages of 54 and 80 who participated in a program on friendship during the year after the course. At the same time a significant reduction was found in the loneliness of a matched control group that had been drawn from a large representative sample. There are two possible explanations for the finding that loneliness declines in both groups. In the first place, the high level of loneliness that is characteristic of the women studied would most likely be experienced as undesirable if not intolerable, thus motivating them to take action to reduce their loneliness. In the second place, there is regression to the mean due to measurement errors, which explains a certain amount of the reduction in loneliness.

Use of a method for studying individual change that takes regression to the mean into account reveals that almost twice as many women who followed the program were successful in reducing their loneliness significantly, compared to the women from the control group. The program is thus relatively effective for those women who choose to participate in both the program and the study; however the fact that the women who were studied are self-selected means that they may differ systematically from women in the control group. The program participants belong to the group of "socially active lonely" who are willing to go out in search of new contacts, as opposed to those who are resigned to being lonely (De Jong Gierveld, 1984). Due to this selection factor, it is not possible to conclude that the friendship program would work for all lonely older women.

Information on qualitative and quantitative changes in friendship among participants in the program seems to support the notion that developing new and better friendships can help reduce loneliness. A

message repeated throughout the course is that a complex network of different types of friendships is the best protection against loneliness; this notion is supported by the results. Merely having friends is not sufficient, as is evident by the fact that 90% of the women in the program placed friends in their convoys at the first measurement, when they were very lonely. A combination of qualities in different levels of friendship is most beneficial; regular companionship, for example in shared activities, is important, as is access to close friends, who can serve as confidants and provide other forms of support. The type(s) of friendships that older women need to develop to reduce loneliness depends on their individual situation in terms of the relationships already available as well as their needs and desires in relationships; the friendship program offers participants an opportunity to analyze their own situation and encourages them to set goals in friendship and actively strive to meet them.

Unfortunately we do not have the same type of information on friendship for the control group, thus we can only speculate on how they reduced their loneliness. One possibility is that they reduced their loneliness by lowering their "standards" for relationships, that is, no longer desiring what they do not have in the way of relationships. This was found in an earlier study of very lonely people who were followed for two years (van Tilburg, 1982). Another possibility is that repeating interviews with older persons on their network of social relationships may influence their attitudes and behavior in relationships in a direction that is considered desirable by researchers, that is toward reducing loneliness. This results of the LSN survey suggest the presence of such a learning effect among its older respondents (de Jong Gierveld & Dykstra, 1996).

There have not been many studies on similar interventions involving control groups. One study on participants in a course for widows which included a control group, did not find a significant decline in loneliness among either the participants or the control group of widows who had been recruited for the study (van Lammeren & Geelen, 1995). Less controlled studies of older women in a friendship club (Jerome, 1983) and older persons looking for companionship through an intermediating agency (Bodde, 1995) did not identify significant changes in friendship or loneliness as a result of these interventions.

The friendship program tends to attract older women living alone who are quite lonely, as was intended. It is important to point out the unique quality of this sample, in terms of the high loneliness scores at the first measurement point. Despite the availability of a pool of 913 women from a nationally representative sample, it was difficult to

find exact matches on loneliness scores for the 32 participants in the program; examination of Table 2 reveals the variations in scores between the participants and those in the control group. There is a difference of 6 years in average age between the experimental group that participated in the friendship course and the control group; the older age of the control group (69.8 versus 63.4) may have contributed to their lower success rate in reducing loneliness. However in the study from which the control group was drawn, age does not appear to influence loneliness between age 54 and 74; there is a kind of turning point at age 75, when loneliness increases significantly (De Jong Gierveld & van Tilburg, 1995).

In future research on participants in the friendship program, recruitment of a larger sample will make the use of multivariate analysis possible in order to determine how much of a reduction in loneliness is due to change in friendship. Inclusion of other measures of well-being besides loneliness is also desirable. Women often spontaneously reported improvements in their self-concept: "I feel more important since the course" and "I feel better about myself"; many seemed to have gained a sense of empowerment, of having more control over their lives through the course. More systematic measurement of such effects would be valuable. In future studies use of a control group of women on waiting lists for the program would be more equivalent to the group of participants in the program, thus eliminating the effects of self-selection. By now the course is well enough established that recruitment is easier, waiting lists occurring naturally can be used for formation of a control group.

In describing their experience in the friendship program, many women report that they learned the most from the stories of other women about the joys and sorrow that they have experienced in friendship. Many participants report that they have had negative experiences in friendship that have made them wary about friends; it is important to realize that negative experiences in relationships often have a greater impact on well-being than positive ones (Rook, 1989).

Perhaps the greatest effect of the course is in bringing older women together in a way that enables them to discover what they have in common; recognition of what they share and the experience of solidarity is a contradiction to the isolation that many feel in their existential situation of living alone in old age.

While fewer men live alone in old age, those who do are at an even greater risk for becoming very lonely than older women; this greater vulnerability to loneliness is evident among never-married, the divorced and widowed older men (de Jong Gierveld & Dykstra, 1998).

The next challenge is to develop a friendship program for older men that creates a similar experience of solidarity for them and makes them aware of the possible importance of friendship for their well-being in later life.

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